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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,320	12/12/2003	Bertrand Lion	LOREAL 3.0-003; OA02421/U	2210
530 7590 06/15/2009 LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			EXAMINER BARHAM, BETHANY P	
			ART UNIT 1615	PAPER NUMBER
			MAIL DATE 06/15/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,320	<b>Applicant(s)</b> LION, BERTRAND	
	<b>Examiner</b> BETHANY BARHAM	<b>Art Unit</b> 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Summary***

Receipt of Applicant's Response filed on 3/23/09 is acknowledged. Claims 1-4 and 6-24 are pending. Claims 1-4 and 6-24 are rejected.

### **Response to Declaration**

The declarations under 37 CFR 1.132 filed 3/23/09 are insufficient to overcome the rejection of claims 1-4 and 6-24 based upon '560 or '446 as evidenced by '517 as set forth in the last Office action because: while they are sufficient for the specific instance of a medium of decamethylcyclotetrasiloxane and a polymer of methylacrylate, methacrylic acid, and monomethacryloxypropylpolydimethylsiloxane, the instant claims are drawn to a much broader scope and there is not a single claim that claims this narrow embodiment nor any showing that any other embodiment within the broad scope also has this unexpected result.

It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716. As such the rejections of record are maintained.

## **MAINTAINED REJECTIONS**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,219,560 ('560).

The instant claims are drawn to a dispersion of particles in a non-aqueous, silicone medium comprising an acrylic polymer of i) C1-C3 alkyl (meth)acrylates, ii) (meth)acrylic acid, and iii) one silicone macromonomer of Formula II.

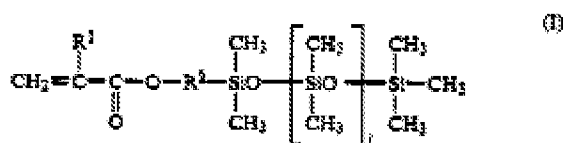
The limitations of claims 1, 3-4, and 18-20 are taught by '560:

- '560 teaches a cosmetic composition comprising a acryl-silicone graft copolymer prepared by i) a dimethylpolysiloxane compound with polymerizable radical group on one of the terminal ends and ii) a radically polymerizable monomer comprising as major components acrylate and/or methacrylate and including various other monomers such as (meth)acrylic acid (abstract, col. 3, line 26-col. 4, line 6).
- The acrylate and/or methacrylate monomers are included in an amount of at least 50% by weight of the copolymer and specific monomers include methyl(meth)acrylate, ethyl(meth)acrylate, and the like (col. 3, lines 55-65).

- '560 teaches that the copolymer is combined with a low-viscosity silicone oil like dimethylpolysiloxane to form a stable composition (abstract, col. 5, lines 7-22).

The limitations of claims 7-17 are taught by '560:

- As in instant claims 7-8 and 16-17, the molecular weight of the copolymer is taught to be 3,000-200,000, preferably 5,000-100,000 (col. 5, lines 1-5).
- As in instant claims 9-15, the silicone macromonomer is of the following formula (col. 2, lines 35-48, claim 1):



wherein  $\text{R}^1$  represents a methyl group or a hydrogen atom,  $\text{R}^2$  represents a divalent, linear or branched hydrocarbon group having 1-10 carbon atoms and optionally containing one or two ether bonds therein, and  $l$  is a value of 3-300.

- '560 teaches that the silicone monomer is present in the copolymer in a 1:19-2:1 ratio (col. 4, lines 15-16).

The limitations of claims 2 and 20-24 are taught by '446:

- A mixture of acceptable carriers are taught by '560 which are suitable such as volatile silicon derivatives, especially dimethylpolysiloxanes, such as methylphenyl polysiloxane, decamethylcyclopentasiloxane, etc. (pg. 5, lines 19-20, Examples 2, 28-31).
- '560 teaches additional components such as surfactants, hydrocarbons, coloring agents or pigments, preservatives, etc (abstract, Examples).

- The copolymer is included in the cosmetic compositions in an amount from 1-100% by weight, with 5-60% preferable (col. 6, lines 1-3 and 15-28).
- '560 teaches a product for the hair and cosmetic compositions such as make up, mascara, eye liner, skin creams and lotions, etc (col. 5, lines 59-65, Examples).

Claims 1-4 and 6-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/23446 ('446), as evidenced by 5,851,517 ('517).

The limitations of claims 1, 3-4, and 7-8 are taught by '446:

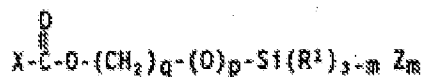
- '446 teaches a cosmetic composition comprising adhesive agents which are polysiloxane grafted polymers made by polymerization of polysiloxane containing monomers and non polysiloxane containing monomers, the agent having a weight average molecular weight of at least about 20,000, and 1 to 50% by weight of polysiloxane containing monomer (abstract). '446 teaches that the molecular weight of a vinyl polymer backbone, polydimethylsiloxane macromer is at least about 500, preferably from about 1000 to 100,000, most preferably about 2000 to about 50,000 (pg.5, lines 29-pg. 6, line 7).
- '446 teaches that the polysiloxane grafted polymers comprise 1-50% by weight of polysiloxane monomers and 50-99% by weight of the non-polysiloxane monomers which can be selected from A and B monomers (pg.8, lines 3-8). A monomers are taught by '446 to preferably include n-butyl methacrylate, isobutyl methacrylate, t-butyl methacrylate, 2-ethylhexyl methacrylate, methyl

methacrylate, etc, while B monomers include acrylic acid, methacrylic acid, hydroxyethyl methacrylate, etc. (pg. 8, line 9-pg. 9, line 8).

- '446 teaches polymer compositions with monomers A, B and C dispersible in nonpolar solvents, such as cyclomethicone (pg. 10, line 32-pg. 11, line 2).

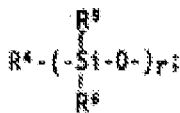
The limitations of claims 6 and 9-15 are taught by '446:

- '446 teaches that the preferred polysiloxane monomer has the formula:



where m is 1-3, (preferably m=1); p is 0 or 1; q is 2-6; R<sup>1</sup> is hydrogen, hydroxyl,

lower alkyl, alkoxy, alkylamino, aryl or alkaryl (preferably alkyl); X is  $\begin{array}{c} \text{CH}=\text{C}- \\ | \quad | \\ \text{R}^2 \quad \text{R}^3 \end{array}$ ; R<sup>2</sup> is preferably hydrogen R<sup>3</sup> is hydrogen, methyl or CH<sub>2</sub>COOH (preferably methyl);



and Z is R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup>, independently, preferably lower alkyl, r is an integer of about 5 or higher, preferably 10-1500 (most preferably about 100 to about 250). Most preferably R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> are methyl, p=0 and q=3 and the level of this monomer is from 1 to about 50%, preferably about 1 to about 40%, more preferably about 2 to about 25% (pg. 9, line 9 to pg. 10, line 15).

- '446 teaches that polymer which are soluble or dispersible in less polar or nonpolar solvents, such as cyclomethicone (which is the silicone oil polydimethylsiloxanes, and evidenced by '517 teaches above as a non-aqueous liquids of Hanson solubility of less than 17 (MPa)<sup>1/2</sup>) ('446 pg.10, line 30 and '517

col.3, lines 30-55). '446 teaches the compositions preferably comprise about 5-98% monomer A, from 0 to 80%, most preferably 0 to 20%) of monomer B, and from about 1 to about 40% (preferably 2 to about 25%) of monomer C (pg.10, line 30-pg.11, line 2).

- '446 teach examples polymers I-III with acrylic and silicone macromers, specifically polymer III is a PDMS macromer (polydimethylsiloxane) polymerized with isobutyl methacrylate, ethylhexylmethacrylate and dimethylmethacrylamide (pg.12, line 7-pg. 13, line 35).

The limitations of 16-19 are taught by '446:

- '446 teaches that the polymeric agent has a weight average molecular weight of at least about 20,000 (abstract, pg. 4, lines 33-35) and that there is no upper limit but most preferably between the limits of about 100,000 and about 750,000 (pg. 5, lines 1-8).
- '446 teaches that the particles are of the size of a few hundred nm or less (pg. 6, lines 27-28).

The limitations of claims 2 and 20-24 are taught by '446:

- A mixture of acceptable carriers are taught by '446 which are suitable for application to the skin and hair are present in the amount of about 0.5-99.5%, most preferably from about 10 to about 98% (col. 15, lines 26-32), such as volatile silicon derivatives, especially siloxanes, such as phenyl pentamethyl disiloxane, methoxypropyl heptmethyl cyclotetrasiloxane, cyclomethicone,



dimethicone, etc. (pg. 16, lines 16-25). As evidenced by '517 silicone oils above have a Hanson solubility of less than 17 (MPa)<sup>1/2</sup> ('517 col.3, lines 30-55).

- '446 teaches additional components such as surfactants, pearlescent aids, coloring agents, oxidizing agents, reducing agents, sequestering agents, perfumes, polymer plasticizing agents, etc (pg. 28, line 22-pg. 29, line 13).
- Examples I-III teach the polysiloxane graft polymer composition in the amount of 4.5% by weight of the composition, example VIII teaches 3%, example XI teaches 4% by weight.
- '446 teaches a product for the hair (hair spray, mousse, tonic, shampoo, conditioner) (pg. 16, lines 1-3) and cosmetic compositions such as make up, mascara, eye liner, nail polish, skin creams and lotions, etc (pg. 4, lines 26-32).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-4 and 6-24 have been considered and are not persuasive to overcome the previous 103 rejections. Applicant argues that '560 does not include an Example or embodiment with acrylic or methacrylic acid and that such components are clearly optional ingredients. The Examiner respectfully disagrees as '560 teaches other compounds beside acrylates that can be included are (meth)acrylic acid (col. 4, lines 1-6) and the lack of an identical example of the instant claims in '446 is not a teaching away as the whole disclosure is considered in the rejection and inclusion of (meth)acrylic acid would be obvious.

Applicant argues that the '446 art does not teach C1-C3 alkyl (meth)acrylate monomers and one or more additional monomers selected from...acrylic and methacrylic acid. The Examiner respectfully disagrees, as detailed above '446 teaches polymer compositions with monomers A (such as methyl methacrylate), monomer B (such as acrylic acid, methacrylic acid) and monomer C (silicone macromonomer) dispersible in nonpolar solvents, such as cyclomethicone (pg. 10, line 32-pg. 11, line 2). The lack of an identical example of the instant claims in '446 is not a teaching away as the whole disclosure is considered in the rejection.

The Applicant is right that Experimental A is not identical to the instant amended claims, it teaches 60/20/20 of t-butyl acrylate/acrylic acid/PMDS (of monomers A/B/C), but the Examiner respectfully points out that monomer A is taught by the specification to also include methylmethacrylate as a preferred monomer. Therefore, such a substitution of one preferred A monomer (t-butyl acrylate) of '446 for another methylmethacrylate would be obvious to a skilled artisan. As such the prior art does teach a polymer with "C1-C3 alkyl (meth)acrylate monomers and one or more additional monomers selected from...acrylic and methacrylic acid" absent a showing by Applicant that such a substitution results in unexpected results.

Applicant also argues that '446 does not explicitly teach non-aqueous solutions and that the disclosure of silicone as a carrier media does not mean that the media are non-aqueous. The Examiner respectfully disagrees as '446 teaches that the silicone-grafted polymers as made are either (a) soluble in aqueous formulation or (b) soluble or dispersible in solvents such as cyclomethicone (pg. 10, lines 20-31), which

encompasses the instant claims. The mere fact that Applicant instant claims only polymers dispersed in solvents like cyclomethicone is not novel or patentable over '446, which teaches dispersion in cyclomethicone or water. Further, '446 teaches that volatile silicone derivatives, especially siloxanes are preferred solvents for dispersing the silicone-grafted polymer (pg. 16, lines 16-25). Applicant further argues that '446 Examples IX and X teach away from applicant's invention as they teach compositions comprising water, however Example IV does not contain any water. In looking at the Example IX and X the "styling polymer premix" phase is free of water containing only a polymer (exp. B) and siloxanes and butyl stearate, the mere fact that it is added to make the personal care composition that further contains water is not outside the bounds of the instant claims. Further, Applicants Instant Example 8 contains large amounts of water in a personal care composition to which the silicone containing polymer dispersion is added.

Applicant further argues that inclusion of the '517 reference in the '446 rejection is incorrect. The Examiner respectfully points out that the '517 reference is simply relied upon to clarify that the silicone solvents (such as cyclomethicone or polydimethylsiloxane, etc) taught by '446 inherently have the global solubility parameter according to the Hansen solubility space of less than or equal to 17 (MPa)<sup>1/2</sup>('446 pg.10, line 30 and '517 col.3, lines 30-55). A reliance on a reference to show that a physical property is inherent is not incorrect and as such the rejection stands. The claims remain rejected over '560 and also by '446 as evidenced by '517.

### ***Conclusions***

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bethany Barham whose telephone number is (571)272-6175. The examiner can normally be reached on M-F, 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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